

Mobile AD-Hoc Network Projekt

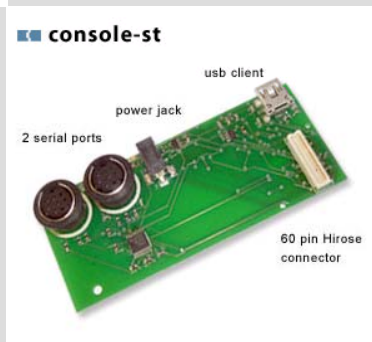
First short presentation

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Hardware Specification



- Gumstix Verdex motherboard
- Speed:400MHz
- 64MB RAM
- 12MB FLASH

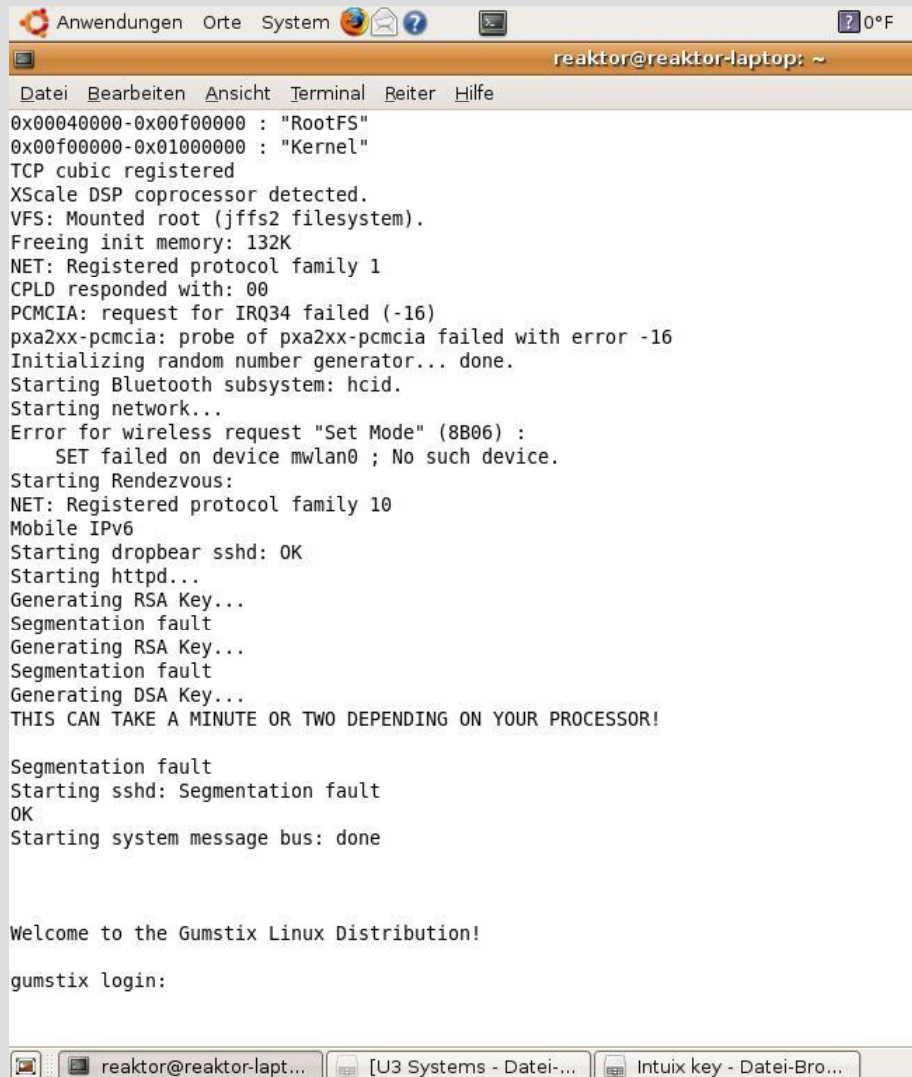


- Console-ST
- Adds two serial ports and usb Port



- WIFISTIX
- 802.11(b) and 802.11(g)
- Channels 1-13

Network Configuration



```
Anwendungen Orte System 0°F
reaktor@reaktor-laptop: ~
Datei Bearbeiten Ansicht Terminal Reiter Hilfe
0x00040000-0x00f00000 : "RootFS"
0x00f00000-0x01000000 : "Kernel"
TCP cubic registered
XScale DSP coprocessor detected.
VFS: Mounted root (jffs2 filesystem).
Freeing init memory: 132K
NET: Registered protocol family 1
CPLD responded with: 00
PCMCIA: request for IRQ34 failed (-16)
pxa2xx-pcmcia: probe of pxa2xx-pcmcia failed with error -16
Initializing random number generator... done.
Starting Bluetooth subsystem: hcid.
Starting network...
Error for wireless request "Set Mode" (8B06) :
    SET failed on device mwlan0 ; No such device.
Starting Rendezvous:
NET: Registered protocol family 10
Mobile IPv6
Starting dropbear sshd: OK
Starting httpd...
Generating RSA Key...
Segmentation fault
Generating RSA Key...
Segmentation fault
Generating DSA Key...
THIS CAN TAKE A MINUTE OR TWO DEPENDING ON YOUR PROCESSOR!

Segmentation fault
Starting sshd: Segmentation fault
OK
Starting system message bus: done

Welcome to the Gumstix Linux Distribution!
gumstix login:
```

What we have done in the last weeks:

- Installing Linux and learning the basics of working with Linux
- Configuring the USB-Network
- Flashing the Gumstix with the newest buildroot release (added usefull paketes like TCPDump and driver for WIFISTX)
- Setting up/testing wireless LAN in Ad-hoc Mode
- Install the Buildroot Crosscompilation Software on the Laptop

Idea of Wolf Pack



Background from the nature:

- Wolf Pack
- One Alpha Wolf
- All other follow the alpha animal

Motivation



sector of the economy:

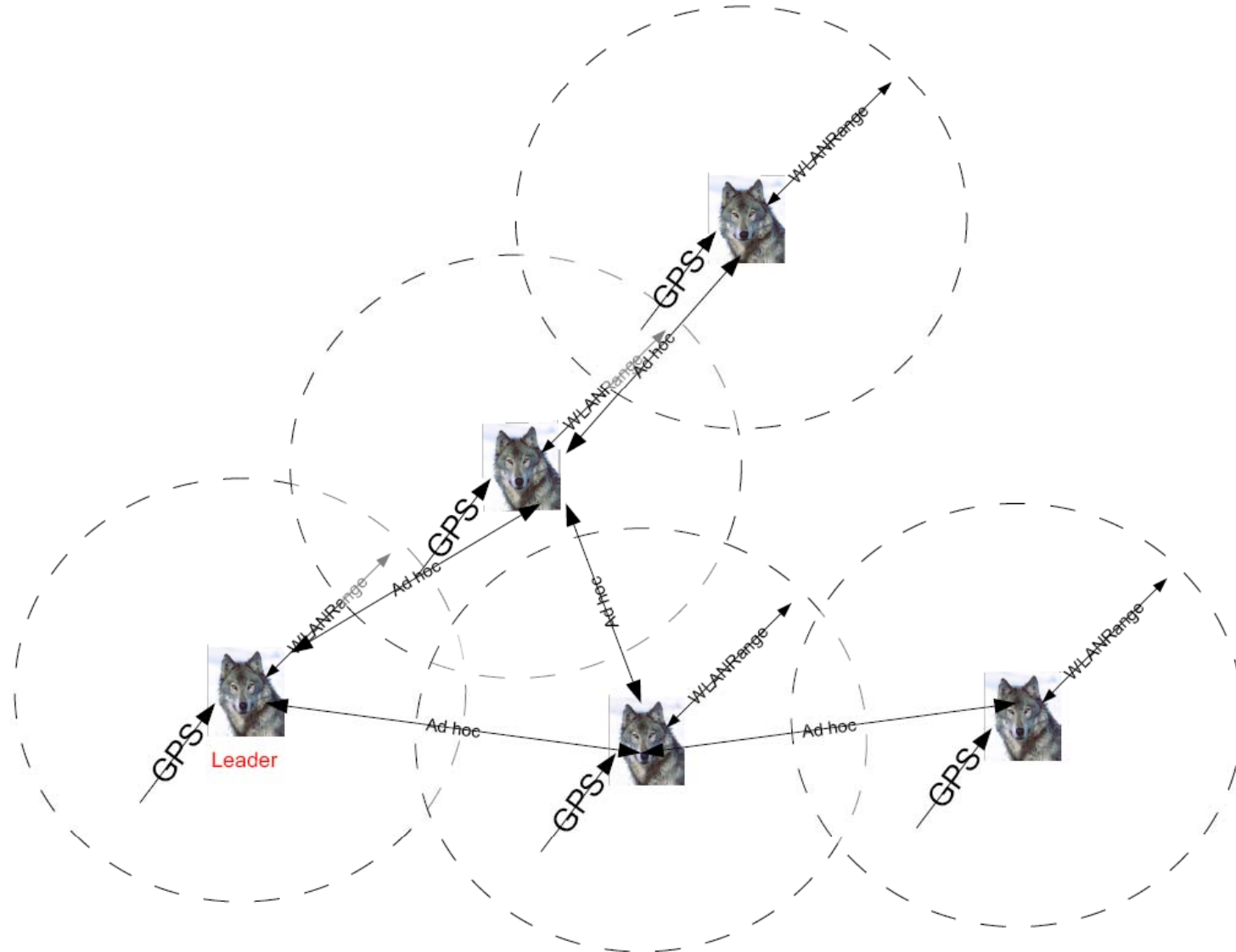
- Cheaper transportation of goods through land, air and water



military use:

- safe of money and human life

Setup



Referencelist:

- Our supervising tutor Chia Ching Ooi
- Prof. Schindelhauer - Mobile Ad Hoc Networks
- <http://docwiki.gumstix.org/>
- Ram Ramanathan, Jason Redi. A Brief Overview of Ad Hoc Networks: Challenges and Directions
- Imrich Chlamtac, Marco Conti, Jennifer J.-N. Liu, Mobile Ad Hoc Networking: Imperatives and Challenges, in Ad Hoc Networks
- Wolfgang Kiess, Martin Mauve, A Survey on Real-World Implementations of Mobile Ad-Hoc Networks, in Ad Hoc Networks

END

Thanks for your attention



Have a nice day